Title	Occurrence of Silicified Tree Trunks from Site BG-X, West of Baragoi, Kenya
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Citation	African study monographs. Supplementary issue (1987), 5: 157-161
Issue Date	1987-03
URL	http://dx.doi.org/10.14989/68331
Right	
Type	Departmental Bulletin Paper
Textversion	publisher

African Study Monographs, Supplementary Issue 5: 157–161, March 1987

OCCURRENCE OF SILICIFIED TREE TRUNKS FROM SITE BG-X, WEST OF BARAGOI, KENYA

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Silicified tree trunks lie scattered in the north of Site BG-X where *Kenyapithecus* occurred. The Site GB-X is situated at 200 m north from the road, about 5 km WNW of Nachola (Ishida, 1984 ; Makinouchi *et al.*, 1984 ; Pickford *et al.*, 1984). There, silt and sand stones inserted between aphyric basalt lavas outcrop about 17 m thick and dip less than 10 degrees to west (Fig. 1, 2). Silicified trunks are not found *in situ*, but they are estimated to occur from the siliceous beds upper than the lowest silt stone including *Kenyapithecus* fossils.

Thirty five silicified trunks were numbered in 1984's survey. The chips of 26 of them were collected. Most of them are not completely preserved peripherally and big in diametre. The diametre of trunks is equal or more than the long width (Table 1). However, 2 specimens are completely preserved peripherally and were pressed, and other 2 specimens branched.

It appears that the bark is twisted and all trunks are same kind of tree. The annual rings are obscure, but some rings are observed. Thin sections from 16 specimens collected in 1984 and 4 specimens collected in 1982 were observed under microscope and were identified a single species of Family Euphorbiaceae, Subfamily Crotonoideae (Suzuki, 1987).

It seems that the fossil beds of Site BG-X connect with the cherty limestone with silicified tree trunk (Baker, 1963) outcropping at the southeastern foot of a hill near Muruilem, 3 km northeast from Site BG-X. Baker described the geological succession of Muruilem as follows:

		feet
	10. Grey basalt	c.40
	9. Vesicular purple basalt	c.50
	8. Cherty limestone with silicified tree trunks	6-8
Basalt and tuff formation	7. Dark grey basalt	c.15
	6. Coarse sands	3-4
	5. Dark green tuff	10
	4. Black porphyritic basalt	c.30
	3. Fine white sands	c.8
Sub-volcanic sediments	2. Friable olive-grey clay	c.2
	1. Conglomeratic grit	3
(Basement System)		

Table 1. Size of Silicified Tree Trunks of Site BG-X

Sample No.	long width (cm)	short width (cm)	length (cm)	reference
84-1	10	4	8	15 cm*
-2	30	—	—	fragment
-3	20	—	—	
-4	55	30	45	
-6	35	—	—	fragment
-7	45	30	30	
-8	50	30	60	
-9	45	35	—	
-10	40	—	32	
-11	45	20	20	
-12	43	15	100	
-13	—	—	—	
-15	—	—	—	
-17	—	—	—	
-18	45	30	60	
-19	35	25	45	
-20	20	15	20	fragment
-21	37	20	60	
-22	—	—	—	fragment
-24	26	11	42	
-27	—	—	—	
-28	23	17	40	
-32	18	12	20	24 cm*
-33	25	15	15	
-34	7.5	3.5	—	pressed
-35	12	6.5	—	pressed

* estimated diametre

We collected 4 specimens of silicified tree trunk at Muruilem. One of them (820929-18) is identified Euphorbioxylon, but other 3 specimens are different broadleaved trees.

The facts that the fossil tree trunks are big in diametre and that a single species was dominant at Site BG-X, remind of several taxa of Euphorbiaceae in Kenya. For example, *Croton megalocarpus* is a forest tree which is 40 m or more in height and a dominant upper-storey tree in plateau forests of Nairobi, Ngjong, Kiambu and Nyeri in Kenya. They are semideciduous forests occurring within the annual rain-fall range of 875-1000 mm (Dale and Greenway, 1961 ; Lind and Morrison, 1974)

The fossil bed deposited in the lake on the aphyric basalt lavas and sedimented broadly overlying the peneplain of basement rocks. It is considered that the sedimentary process of the siliceous bed such as cherty limestone is a problem for the estimation of paleoenvironment.

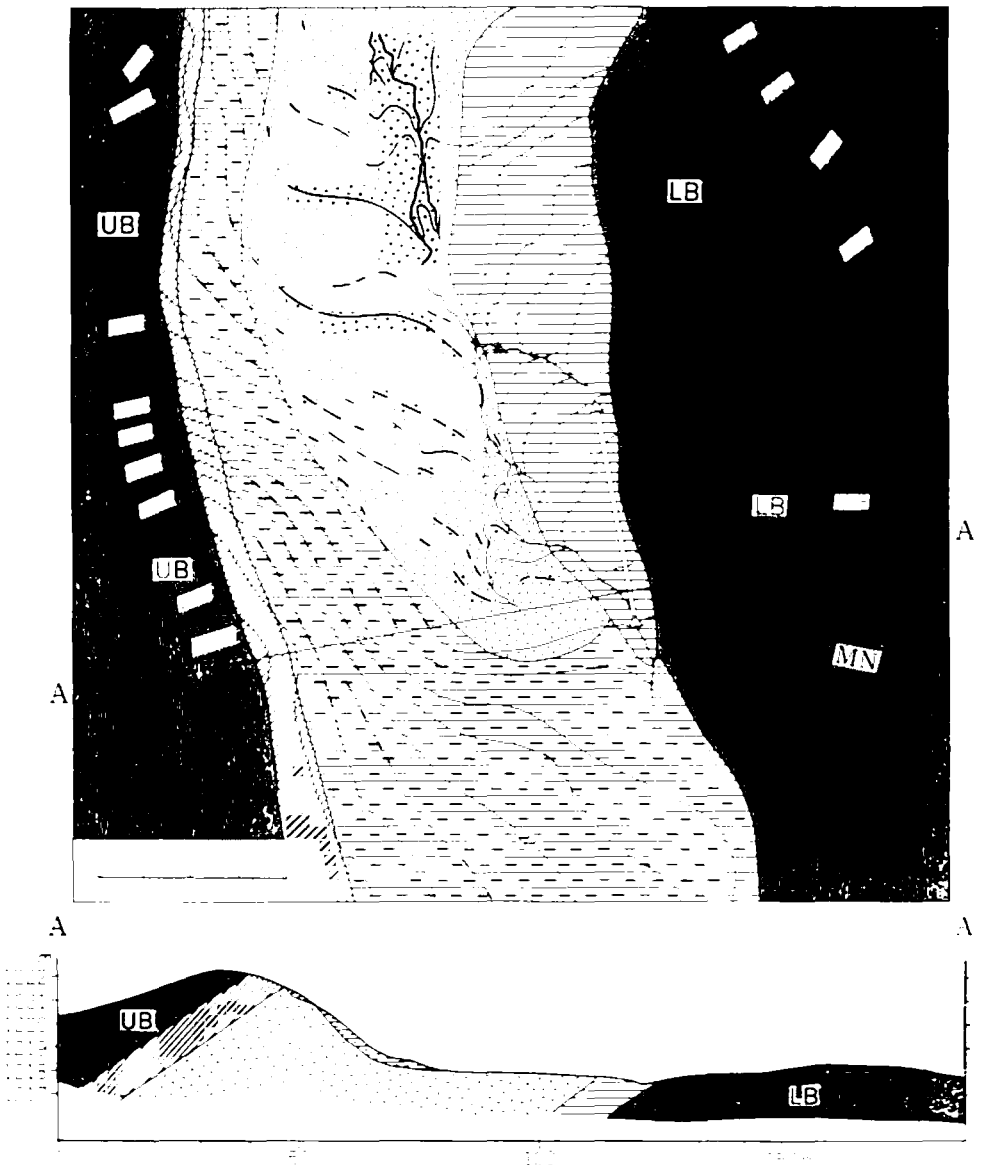

Fig. 1 Geologic Map and Profile of Site BG-X

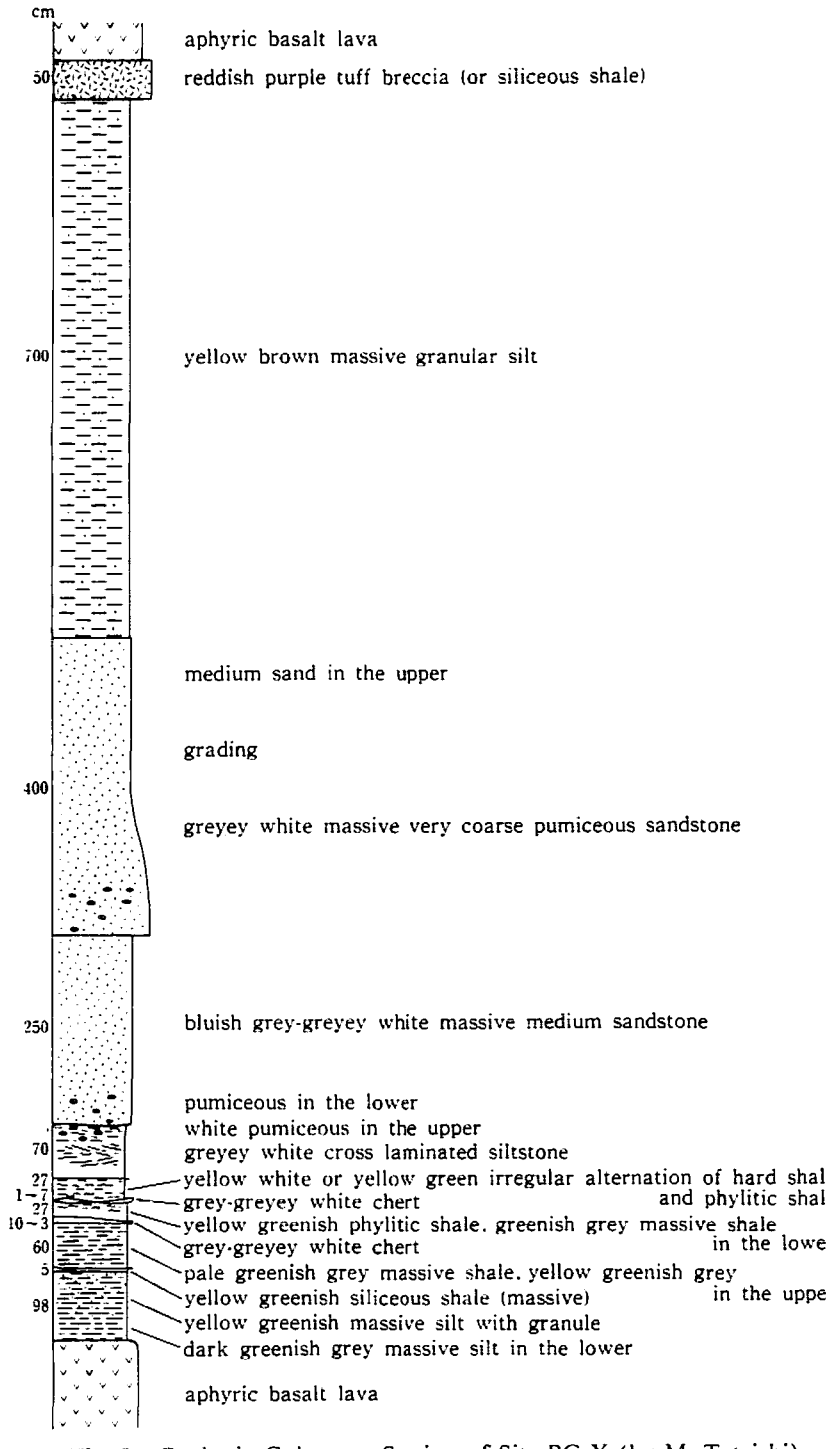

Fig. 2 Geologic Columnar Section of Site BG-X (by M. Tateishi)

Miocene plant fossils in East Africa were reported from Bugishu Series under Elgon volcanics in Uganda (Chaney, 1933) and Rusinga Island in Kenya (Chesters, 1957). The former consists of woodland or open wood land plants, and the latter is those of the forest-edge vegetation in the tropics. The paleoenvironment of Site BG-X may be different from these Miocene flora because a single species of Euphorbiaceae is dominant.

ACKNOWLEDGEMENTS are due to Dr. M. Tateishi who made the geological map and columnar sections in the area of Site BG-X. I wish to thank Messrs. A. Maende, E. Mariga, J. Karanga and F. Odera, the students of Nairobi University, for the surveying of the topographic map of the area of the scale 1 : 500.

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